AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A polymer comprising a polymeric backbone comprising at least one unit having the structure (I),

wherein each of R-R⁴ comprise groups a group selected from the group consisting of H, C₁-C₁₂ alkyl, C₆-C₁₈ aryl, C₇-C₁₈ aralkyl, C₆-C₁₈ cycloalkyl or any member of the said group consisting of C₁-C₁₂ alkyl, C₆-C₁₈ aryl, C₇-C₁₈ aralkyl, C₆-C₁₈ eycloalkyl-substituted, within the carbon chain or appended thereto, with one or more heteroatoms; R and R² or R and R⁴ or R and R¹ or R² and R³ may be joined so that with the carbon atom(s) to which they are attached they together form a saturated, partially unsaturated or unsaturated ring system respectively, may have a pendent group which may incorporate a linker unit, (for example a peptide linkage or a unit having the structure (I); A comprises a proton donating moiety selected from the group consisting of

B comprises a hydrolytically labile group and is selected from the group consisting of

$$\begin{bmatrix}
0 \\
0
\end{bmatrix}, \begin{bmatrix}
0 \\
0
\end{bmatrix}, \begin{bmatrix}
NH \\
N_{1} \\
0
\end{bmatrix}, \begin{bmatrix}
NH \\
N_{1} \\
N_{2} \\
0
\end{bmatrix}, \begin{bmatrix}
NH \\
N_{1} \\
N_{2} \\
N_{3} \\
N_{4} \\
N_{5}
\end{bmatrix}$$

wherein each R^5 is individually selected from the group consisting of H, C_1 - C_{12} alkyl, C_6 - C_{18} aryl, C_7 - C_{18} aralkyl, and C_6 - C_{18} cycloalkyl; wherein groups A and B are in a cis-configuration about bond C_a - C_b ; m is an integer of in the range from 0 to 100, n, p and q are each an integer of 0 or 1; Q comprises 1 or more structures selected from the group consisting of

$$\begin{bmatrix} 0 \\ 1 \\ 1 \\ 1 \end{bmatrix}, \begin{bmatrix} R^6 \\ N \\ 1 \end{bmatrix}, \begin{bmatrix} 0 \\ 1 \\ 0 \end{bmatrix}, \begin{bmatrix} 0 \\ 1 \\ 0 \end{bmatrix}, \begin{bmatrix} N \\ N \\ 1 \end{bmatrix}, \begin{bmatrix} N \\ 1 \\ R^{7} \end{bmatrix}, \begin{bmatrix} N \\ 1 \\ R^{11} \end{bmatrix}, \begin{bmatrix} N \\ 1 \\ 1 \end{bmatrix}$$

wherein R⁶-R¹¹ are individually selected from the same group as defined for group R above and r is an integer between 1 and 5000, and wherein the other components of the polymeric backbone may be other groups having the structure (I), peptide units or degradable polymeric, oligomeric or monomeric units.

2. (Original) A polymer according to claim 1, wherein C_a - C_b is a double bond and p and q are each 0.

3. (Currently Amended) A polymer according to claim 1 wherein R, R² and R³ are selected from the group consisting of hydrogen, methyl, ethyl or propyl, preferably hydrogen.

- 4. (Previously Presented) A polymer according to claim 1, wherein A is a carboxylic acid group.
- 5. (Previously Presented) A polymer according to claim 1, wherein B comprises an amide bond.
- 6. (Previously Presented) A polymer according to claim 1, wherein Q comprises a carbonyl functionality.
- 7. (Currently Amended) A polymer according to claim 1, wherein the polymeric backbone additionally comprises polymers selected from the group consisting of acrylic polymers, alkylene polymers, urethane polymers, amide polymers (including polypeptides), polysaccharides and ester polymers.
- 8. (Currently Amended) A polymer according to claim 1, wherein the polymeric backbone comprises polymers a polymer selected from the group consisting of derivatised polyethyleneglycol and copolymers of hydroxyalkyl(meth)acrylamide, most preferably amine derivatised polyethyleneglycol or hydroxypropylmethacrylamide-methacrylic acid copolymers or amide or ester derivatives thereof.
- 9. (Currently Amended) A polymer according to claim 1, wherein the polymeric backbone comprises the structure (II)

$$\begin{bmatrix}
Q & \begin{pmatrix} A \\ R^3 \end{pmatrix}_n & \begin{pmatrix} R^1 \end{pmatrix}_p & B \\
Q & \begin{pmatrix} A \\ R^4 \end{pmatrix}_q & B \\
R^2 & R & B
\end{bmatrix}_a & \begin{bmatrix} \begin{pmatrix} R^{13} \\ R^3 \end{pmatrix}_s & \begin{pmatrix} R^{13} \\ R^4 \end{pmatrix}_c & (II)$$

wherein A, B, Q, R-R⁴, m, n, p and q are as defined in claim 1; L is a polymeric, oligomeric or copolymeric bridging group which comprises polymer selected from the group consisting of acrylic polymers, alkylene polymers, urethane polymers, polyethylene glycols, polyamides, polysaccharides and polyesters; a is an integer in the range of 1 to 100000, b and c are integers in the range of 0 to 100000 and s is an integer in the range of 0 to 100; D comprises one or more structures individually selected from the group consisting of [[,]]

$$\begin{bmatrix}
R^{14} \\
R^{14}
\end{bmatrix}$$

$$\begin{bmatrix}
R^{14} \\
R^{15}
\end{bmatrix}$$

$$\begin{bmatrix}
R^{14} \\
R^{14}
\end{bmatrix}$$

$$\begin{bmatrix}
R^{14} \\
R^{15}
\end{bmatrix}$$

$$\begin{bmatrix}
R^{14} \\
R^{15}
\end{bmatrix}$$

wherein R¹⁴ and R¹⁴ comprise groups individually selected from the same groups as defined for R or may comprise a structure selected from the group consisting of

wherein n is an integer in the range of 0-100, R^{15} is selected from the group consisting of hydrogen and C_1 - C_6 alkyl, R^{16} to R^{18} are individually selected from the

group consisting of H, C_1 - C_{12} alkyl, C_1 - C_{12} alkenyl, C_6 - C_{18} aryl, C_7 - C_{18} aralkyl, C_5 - C_{18} cycloalkyl or is selected from the any member of said group consisting of C_4 - C_{12} alkenyl, C_6 - C_{18} -aryl, C_7 - C_{18} -aralkyl, C_6 - C_{18} -cycloalkyl substituted, within the carbon chain or appended thereto, with one or more heteroatoms [[,]] or a pendent group comprising a linker unit, for example a peptide linkage or a unit having the structure (I) or a leaving group; R^{13} is selected from the group consisting of H, C_1 - C_{12} alkyl, C_1 - C_{12} alkenyl, C_6 - C_{18} aryl, C_7 - C_{18} aralkyl, C_5 - C_{18} cycloalkyl or is selected from the any member of said group consisting of C_4 - C_{12} alkyl, C_4 - C_{12} alkenyl, C_6 - C_{18} -aryl, C_7 - C_{18} -aralkyl, C_8 - C_{18} -aryl, substituted, within the carbon chain or appended thereto, with one or more heteroatoms, R^{13} optionally incorporating a linker unit, for example a peptide linkage or a unit having the structure (I).

10. (Currently amended) A polymer according to claim 9, wherein L comprises amine derivatised polyethyleneglycol, most preferably a structure selected from the group consisting of

$$\begin{bmatrix}
H & O & H & O & H & O & H \\
N & N & PEG & N & N & R^{20}
\end{bmatrix}$$

$$\begin{bmatrix}
H & O & H & O & H & O & H \\
N & N & PEG & N & N & N & N \\
R^{23} & O & O & R^{24}
\end{bmatrix}$$

]]

wherein PEG is polyethyleneglycol, R¹⁹-R²⁴ optionally incorporates a pendent group comprising a cleavable linker unit, and may additionally comprise groups individually selected from the same groups as defined for R or may comprise a structure selected from the group consisting of [[

]]

wherein n and R¹⁶ to R¹⁸ and R¹⁶ to R¹⁸ are as defined in claim 9.

- 11. (Currently Amended) A polymer according to claim 9, wherein s is an integer [[of]] in the range from 1 to 10, preferably 1.
- 12. (Currently Amended) [[a]] \underline{A} polymer according to claim [[9]] $\underline{29}$, wherein at least one of R^{14} to R^{24} incorporates a cleavable bond, preferably a group (I) or one or more peptide bonds.
- 13. (Currently Amended) A polymer according to claim 9, wherein the polymer is conjugated to a bioactive agent, preferably an anti-cancer agent, most preferably, doxorubicin, daunomycin or taxol.
- 14. (Currently Amended) A polymer according to claim 9, wherein the number average molecular weight is in the range of 0.5kDa-400kDa.

15. (Currently Amended) A polymer according to claim 9, having the structure

wherein PEG is a polyethylene glycol group, or derivative thereof, having a <u>number</u> average molecular weight in the range of 500 Da-100kDa and u is an integer in the range of 1-10000.

16. (Currently Amended) A polymer according to claim 1, having the structure

wherein PEG is a polyethylene glycol group having a <u>number average</u> molecular weight in the range of 500 Da-100kDa or derivative thereof, and u is an integer in the range of 1-10000.

17. (Currently Amended) A prepolymer comprising the structure

$$E = \begin{bmatrix} \begin{pmatrix} R^{1} \end{pmatrix}_{p}, & A' \\ \begin{pmatrix} R^{3} \end{pmatrix}_{p}, & C_{b'} \\ R', & (R^{4})_{q}, & R^{2'} \end{bmatrix}_{x} \begin{bmatrix} R^{13} \\ R^{2} \end{bmatrix}_{y} \begin{bmatrix} Q & \begin{pmatrix} R^{3} \end{pmatrix}_{n}, & A \\ Q & \begin{pmatrix} R^{3} \end{pmatrix}_{n}, & C_{b} \\ R^{2} & R^{2} \end{bmatrix}_{z}$$
(III)

wherein A, B, Q, R-R³, m, n, p and q are as defined in claim 9; R¹³ and L are as defined in claim 9; A', B', Q', R^{1'}-R^{4'}, m', n', p', and q' are selected from the groups as defined for A, B, Q, R¹-R⁴, m, n, p and q respectively; E and K are selected from the group consisting of hydrogen, an activating group or a protecting group and may be the same or different; z is an integer [[of]] in the range from 1 to 100, y is an integer [[of]] in the range from 0 to 100.

- 18. (Original) A prepolymer according to claim 17, wherein z is 1, y is 1 and x is 1.
- 19. (Currently Amended) A prepolymer according to claim 17, wherein B and B' comprise a carboxyl group and E and K are selected from the group consisting of hydrogen, N-succinimidyl, pentachlorophenyl, pentaflourophenyl, paranitrophenyl, dinitrophenyl, N-phthalimido, N-norbornyl, cyanomethyl, pyridyl, trichlorotriazine, and 5-chloroquinoline, preferably hydrogen or N-succinimidyl.
 - 20. (Currently Amended) A prepolymer comprising the structure (IV)

$$G = \begin{bmatrix} \begin{pmatrix} R^1 \end{pmatrix}_{p} & \begin{pmatrix} R^3 \end{pmatrix}_{n} & \begin{pmatrix} R^3 \end{pmatrix}_{m} & \begin{pmatrix} R^3 \end{pmatrix}_{j} & \begin{pmatrix} IV \end{pmatrix}$$

wherein A, B, Q, R-R⁴, m, n, p and q are as defined in claim 9; D is as defined in claim 9; G and M are selected from the group consisting of hydrogen, an activating

group or a protecting group, and i and j are integers [[of]] in the range from 1 to 10.

- 21. (Original) A prepolymer according to claim 20, wherein i is 1 and j is 1.
- 22. (Currently Amended) A prepolymer according to claim 20, wherein B and D comprise carboxylic acid groups and G and M are selected from the group consisting of hydrogen, N-succinimidyl, pentachlorophenyl, pentaflourophenyl, para-nitrophenyl, dinitrophenyl, N-phthalimido, N-norbornyl, cyanomethyl, pyridyl, trichlorotriazine, and 5-chloroquinoline, preferably hydrogen or N-succinimidyl.
- 23. (Currently Amended) A process for preparing a polymer, copolymer or prepolymer comprising reacting at least one compound having the structure (V)

$$Q'' \xrightarrow{\begin{pmatrix} R^{26} \\ U \end{pmatrix}_{V}} \begin{pmatrix} R^{26} \\ R^{27} \end{pmatrix} \qquad (V)$$

wherein R²⁵, R²⁶ and R²⁷ are selected from the group as defined for R; Q" is selected from the group consisting of carboxylic acid, primary or secondary amine <u>and</u> carbonyl; u is an integer [[of]] <u>in the range from</u> 0 or 1, v is an integer [[of]] <u>in the range from</u> 1 to 100, R²⁷ and R²⁵ may be attached to form part of a C₃ - C₁₂ ring system which may have more than one unsaturated bond and may be aromatic; with at least one compound selected from the group consisting of J and R¹³LNHR²⁸,

wherein L and R¹³ groups are as defined above and R²⁸ is selected from the same group as defined for R and may be the same or different, J is a compound having at least one primary or secondary amine and a carboxylic acid group and a pendent group incorporating a cleavable bond.

- 24. (Currently amended) A method of selectively degrading a polymer comprising the steps of:
- a) introducing a polymer as comprising a structure (I) or (II) as defined in claim 9, to an environment having a pH of less than 6.5, and
 - b) cleaving said polymer.
- 25. (Previously Presented) Amended) A method for releasing a bioactive agent comprising the steps of
- a) introducing a conjugate comprising a structure (I) or (II) as defined in claim 9, and a bioactive agent to an environment having a pH of less than 6.5,
- c) cleaving the bioactive agent from the linker group by acid or enzymic hydrolysis,
- d) optionally additionally cleaving the polymer by acid or enzymic hydrolysis.
- 26. (Previously Presented) A composition comprising at least one polymer as defined in claim 1 and a carrier.
- 27. (New)A composition comprising at least one polymer as defined in claim 1 and a pharmaceutically acceptable excipient.

- 28. (Canceled).
- 29. (New) A polymer according to claim 10, wherein L comprises a structure selected from the group consisting of

$$\begin{bmatrix} H & O & H & O & H \\ N & N - PEG - N & N \\ R^{19} & R^{20} \end{bmatrix} \begin{bmatrix} H & O & O & H \\ N & R^{21} & O - PEG - O & N \\ R^{21} & N - PEG - N & N - N \\ R^{22} & N - N - N - N - N \\ R^{23} & O & O & R^{24} \end{bmatrix}$$

wherein PEG

is polyethyleneglycol, R^{19} - R^{24} are individually selected from the same groups as defined for R or comprise a structure selected from the group consisting of

wherein n and R^{16} to R^{18} are as defined in claim 9, R^{19} - R^{24} optionally incorporating a pendent group comprising a cleavable linker unit.

- 30. (New) A polymer according to claim 1 wherein R, R^2 and R^3 are hydrogen.
- 31. (New) A polymer according to claim 13, wherein the polymer is conjugated to an anti cancer agent.

32. (New) A polymer according to claim 31, wherein the polymer is conjugated to doxorubicin, daunomycin or taxol.

- 33. (New) A prepolymer according to claim 19, wherein E and K are selected from the group consisting of hydrogen and N-succinimidyl.
- 34. (New) A prepolymer according to claim 22, wherein E and K are selected from the group consisting of hydrogen and N-succinimidyl.